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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PARSONS, THOMAS H

ART UNIT PAPER NUMBER

1745

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/768,192

Applicant(s)

YANAGAWA ET AL.

Examiner

Thomas H. Parsons

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Figures 4 and 5 are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

reference sign "63A"

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

Page 2, line 23, the text, "...are then made to form fed to a ..." appears awkwardly worded;

Page 3, line 1, suggest changing "later" to --layer--; and,

Page 5, line 11, the text, "...guided by a guide roller 73 to run." appears awkwardly worded.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 recites "*an electrode sheet with an active material layer formed on at least one surface thereof over a wider range than a predetermined width of an electrode and over a predetermined length*". It is unclear as to what the structural relationship is between the electrode sheet and the active material layers in terms of width.

It is unclear as to what is meant by the recitation "*a possible short-circuit portion*" in line 5 of claim 1.

Claims 3 recites “*an electrode sheet with an active material layer formed on at least one surface thereof over a wider range than a predetermined width of an electrode and over a predetermined length*”. It is unclear as to what the structural relationship is between the electrode sheet and the active material layers in terms of width.

It is unclear as to what is meant by the recitation “*a possible short-circuit portion*” in line 6 of claim 3.

Claims 7 recites “*an electrode sheet with an active material at predetermined intervals over a wider range than a predetermined width of an electrode and over a predetermined length*”. It is unclear as to what the structural relationship is between the electrode sheet and the active material layers in terms of width.

It is unclear as to what is meant by the recitation “*a possible short-circuit portion*” in line 9-10 of claim 7.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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7. Claims 1-4 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Kaito et al. (2003/0224242)

Claim 1: Claim 1 has been construed as a product-by-process claim. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps.

“[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.).

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding

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“interbonded by interfusion” to limit structure of the claimed composite and noting that terms such as “welded,” “intermixed,” “ground in place,” “press fitted,” and “etched” are capable of construction as structural limitations.)

Kaito et al. in Figures 1, 3, 4 and 6, disclose an electrode plate (110) for a secondary battery, comprising: an electrode sheet (111) with an active material layer (112) formed on at least one surface thereof; and an insulating sheet (113) adhering to a short-circuit portion of the electrode sheet, such portion being opposed to another electrode, wherein the electrode sheet and the insulating sheet form the electrode plate having a predetermined shape (paragraphs [0046]-[0055], [0063]-[0075], and [0086]-[0093]). See also paragraphs [0017] and [0023]-[0025].

Claim 2: Kaito et al. disclose that an insulating tape such as polypropylene may be affixed to the electrode (paragraph [0071]). Because Kaito et al. disclose the same material for the insulating sheet as that instantly disclosed, the insulating sheet of Kaito et al. would inherently provide a low-temperature thermoplastic paste material applied on one side thereof.

The recitation “is made to adhere to the said electrode sheet through heat adhesion” has been considered, and construed as a process limitation that adds no additional structure to the electrode.

Claim 3: Claim 3 has been construed as a product-by-process claim, and rejected as set forth above in claim 1 wherein further Kaito et al. disclose a secondary battery using an electrode plate (abstract).

Claim 4: The rejection of claim 4 is as set forth above in claim 2.

Claim 7: Claim 7 has been construed as a product-by-process claim, and rejected as set forth above in claim 1.

Claim 8: The rejection of claim 8 is as set forth above in claim 2.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4 and 7-8 rejected under 35 U.S.C. 102(b) as being anticipated by Spillman et al. (5,631,102).

Claim 1: Claim 1 has been construed as a product-by-process claim. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps.

“[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted) (Claim was directed to a novolac color developer. The process of making the developer was allowed. The difference between the inventive process and the prior art was the addition of metal oxide and carboxylic acid as separate ingredients instead of adding the more expensive pre-reacted metal carboxylate. The product-by-process claim was rejected because the end product, in both the prior art and the allowed process, ends

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up containing metal carboxylate. The fact that the metal carboxylate is not directly added, but is instead produced in-situ does not change the end product.).

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979) (holding “interbonded by interfusion” to limit structure of the claimed composite and noting that terms such as “welded,” “intermixed,” “ground in place,” “press fitted,” and “etched” are capable of construction as structural limitations.)

Spillman et al. in Figure 2 disclose an electrode plate (16 or 18) for a secondary battery, comprising: an electrode sheet (32 or 20)) with an active material layer (24, 26 or 36, 38) formed on at least one surface thereof; and an insulating sheet (40) adhering to a short-circuit portion of the electrode sheet, such portion being opposed to another electrode, wherein the electrode sheet and the insulating sheet form the electrode plate having a predetermined shape (abstract, col. 2: 59-col. 3: 40, col. 4: 16-67).

Claim 2: Spillman et al. disclose illustrative materials for the separator 40 include polypropylene and polyethylene (col. 4: 43-67). Because Spillman et al. disclose the same materials for the separator (insulating sheet) as that instantly disclosed, the separator (insulating sheet) of Spillman et al. would inherently provide a low-temperature thermoplastic paste material applied on one side thereof.

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The recitation "is made to adhere to the said electrode sheet through heat adhesion" has been considered, and construed as a process limitation that adds no additional structure to the electrode.

Claim 3: Claim 3 has been construed as a product-by-process claim, and rejected as set forth above in claim 1 wherein further Spillman et al. disclose a secondary battery using an electrode plate (col. 2: 59-col. 3: 40, col. 4: 16-67).

Claim 4: The rejection of claim 4 is as set forth above in claim 2.

Claim 7: Claim 7 has been construed as a product-by-process claim, and rejected as set forth above in claim 1.

Claim 8: The rejection of claim 8 is as set forth above in claim 2.

Allowable Subject Matter

10. Claims 5-6 would be allowable over the prior art references of record if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Reasons for Indicating Allowable Subject Matter

11. The following is a statement of reasons for the indication of allowable subject matter:

The claimed invention is directed toward a method of manufacturing an electrode plate comprising the steps of: intermittently coating at least one surface of an electrode sheet with an active material at predetermined intervals over a wider range than a predetermined width of an electrode plate and over a predetermined length; die-cutting an insulating sheet with a paste

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material adhering onto one side thereof into insulating sheets, each of which has a width wider than a predetermined width of an electrode plate; sticking the insulating sheet to a possible short-circuit portion of the electrode sheet in turn, such portion being opposed to another electrode plate; and simultaneously cutting said electrode sheet and said insulating sheet to form an electrode plate having a predetermined shape.

The prior art references of record neither teach nor suggest the claimed method. Specifically, Kaito et al. present various embodiments disclosing the manner in which the electrode plates comprising an insulating sheet are produced. The methods of Kaito et al. are all directed towards coating the electrode plates with an insulating sheet, no specific coating steps are provide.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H. Parsons whose telephone number is (571) 272-1290. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas H Parsons
Examiner
Art Unit 1745


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